

(a) a plurality of light energy sources configured to emit light energy onto said semiconductor wafer, said light energy sources being positioned so as to form an irradiance distribution across a surface of said semiconductor wafer; and

(b) at least one tuning device positioned amongst said light energy sources, said tuning device comprising a light energy source spaced from at least one optical element comprising at least one focusing lens, said optical element being configured to focus and direct light energy being emitted by said light energy source onto said semiconductor wafer in a manner for more uniformly heating said semiconductor wafer.

37. An apparatus as defined in claim 32, wherein said light energy source and said at least one focusing lens are mounted on a support structure, said support structure being movable for directing light energy emitted from said light energy source onto a determined location on said semiconductor wafer.

51. An apparatus for heat treating semiconductor wafers comprising:

a thermal processing chamber adapted to contain a semiconductor wafer; and

a heating device in communication with said thermal processing chamber for heating a semiconductor wafer contained in said chamber, said heating device comprising:

(a) a plurality of light energy sources configured to emit light energy onto said semiconductor wafer, said light energy sources being positioned so as to form an irradiance distribution across a surface of said wafer, the light energy sources being horizontally oriented with respect to the semiconductor wafer, each of said light energy sources comprising a first lamp device; and

(b) at least one tuning device positioned amongst said light energy sources, said tuning device comprising a second lamp device, wherein said first lamp device is